

Application No. 10/077,849
Attorney Docket No. 29250-000636/US

REMARKS

Claims 1-21 and 23-34 are pending. Of these, claims 1, 14, 21 and 24 are written in independent format. By this reply, claims 22 and 25 have been canceled without prejudice to or disclaimer of the subject matter contained therein.

CLAIM OBJECTIONS

Claims 7, 9, 12, 18 and 21 are objected to because of minor informalities. The Examiner has suggested minor clarifications to these claims, for which Applicants are appreciative. By this reply, Applicants have made those minor clarifications to the claims suggested by the Examiner. Accordingly, withdrawal of the objection is requested.

§ 112 REJECTION

Beginning on page 3 of the Office Action, claims 1-13 stand rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Applicants disagree with the rejection.

As to claims 1-13, the Examiner asserts that the phrase "based on" renders the claim indefinite. Applicants disagree. The phrase "based on" and the very similar "based upon" are phrases very commonly used in U.S. patent claims. A search of the USPTO's patent database using the query "ACLM/"based on" and ISD/1/1/2005->7/1/2006" finds that 44,146 U.S. patents which issued between January 1, 2005 and July 1, 2006 include the phrase "based on" in their claim language; see attached "Exhibit." If its use rendered a claim indefinite, then the presence of the phrase "based on" in the claims of so many U.S. patents would pose a great problem for the USPTO. Rather, the phrase "based on" does not render a claim indefinite.

As support for his assertion regarding the phrase "based on," the Examiner looks to MPEP §2173.05(d) (entitled "Exemplary Claim Language ("for example," "such as")"). This section addresses the use in claims of phrases that include "for example," "e.g.," "such as," etc. This section does not mention the phrases "based on" or "based upon." Applicants submit that MPEP §2173.05(d) does not support the Examiner's assertion.

In view of the foregoing discussion, the rejection under §112, second paragraph, because of the recitation of the phrase "based on" is improper.

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As to the asserted lack of antecedent basis for the phrase "the previous transmission matrix" in claim 13, Applicants request the Examiner to revisit claim 4, where antecedence can be found.

As to the other points made by the Examiner in this rejection, Applicants have made minor clarifying amendments to address the Examiner's concerns.

In view of the foregoing, withdrawal of the §112, second paragraph, rejection is requested.

§ 101 REJECTION

Beginning on page 5 of the Office Action, claims 21-23, 24-26, 27, 29, 31, 32, 33, 34 stand rejected under 35 U.S.C. §101 because the claimed invention is directed to non-statutory subject matter. This rejection is traversed.

A computer-implemented process is statutory according to State Street Bank¹ when it recites not only a "concrete and tangible result," but also a "useful result." Such a process produces a "concrete and tangible result" because the computer is physical and transforms electrical signals. Such a process, however, could fail to recite a "useful result" if it is merely a mathematical algorithm which transforms data that does not correspond to something in the real world. Here, amended claim 21 (taken as an example) generates baseband signals, which are used in wireless communication, and hence represent a useful result. Thus, claim 1 is statutory according to State Street Bank. Claims 23, 24, 26, 27, 29, 31, 32, 33, 34 similar define statutory methods.

In view of the foregoing discussion, withdrawal of the rejection is requested.

§ 102 REJECTION

Beginning on page 7 of the Office Action, claims 1-6, 13-17, 27 and 29 stand rejected under 35 U.S.C. §102(e) as being anticipated by U.S. patent no. 6,724,848 ("the '848 patent") to Hochwald et al. This rejection is traversed.

As a consequence of the rejection under §112, second paragraph, the Examiner has disregarded the portions of the claims that begin with the phrase "based on." Just as it is unreasonable and improper for the Examiner to regard the phrase "based on" as rendering the claims indefinite, it is unreasonable and improper for the Examiner to dismiss the portions of the claims that begin with the phrase "based on."

¹ State Street Bank & Trust Co. v. Signature Financial Group, Inc., 47 USPQ2d 1596 (Fed. Cir. 1998).

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A distinction over the '848 patent of claim 1 (taken as an example) is generating not only baseband signals, but doing so based on a special kind of input data, namely based on Cayley-encoded input data. The '848 patent does not mention Cayley-encoded input data.

Independent claims 14, 27 and 29 recite a feature similar to claim 1, respectively, and thus similarly distinguish over the '848 patent. Claims 2-6, 13 and 15-17 depend at least indirectly from claims 1 and 14, respectively, and thus at least similarly distinguish over the '848 patent.

§ 102/103 REJECTION

Beginning on page 10 of the Office Action, claims 28 and 30 stand rejected under 35 U.S.C. §102(a) as being anticipated by, or in the alternative, under 35 U.S.C. §103(a) as obvious over the '848 patent. This rejection is traversed.

Claims 28 and 30 recite a feature similar to that of claims 1 and 14, respectively, and thus similarly distinguish over the '848 patent.

CONCLUSION

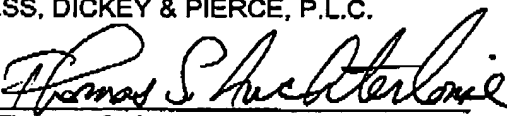
The issues raised in the Office Action are considered to be resolved. Accordingly, Applicant again requests a Notice of Allowance.

If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to contact the undersigned.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge any underpayment or non-payment of any fees required under 37 C.F.R. §§ 1.16 or 1.17, or credit any overpayment of such fees, to Deposit Account No. 08-0750, including, in particular, extension of time fees.

Respectfully submitted,
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TSA/cm:tsa

Attachment: Exhibit

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Results of Search in US Patent Collection db for:
(ACLM/"based on" AND ISD/20050101->20060701): 44146 patents.
Hits 1 through 50 out of 44146


































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PAT. NO.	Title
1 7,069,595	Method of controlling use of digitally encoded products
2 7,069,591	System for encrypting data files of application programs
3 7,069,590	System and method for protecting data streams in hardware components
4 7,069,589	Detection of a class of viral code
5 7,069,585	Physical key security management method and apparatus for information systems
6 7,069,583	Detection of polymorphic virus code using dataflow analysis
7 7,069,581	Method and apparatus to facilitate cross-domain push deployment of software in an enterprise environment
8 7,069,580	Function-based process control verification and security in a process control system
9 7,069,577	Dynamic bandwidth allocation
10 7,069,574	System time clock capture for computer satellite receiver
11 7,069,573	Personal broadcasting and viewing method of audio and video data using a wide area network
12 7,069,571	Automated retirement of interactive applications using retirement instructions for events and program states
13 7,069,560	Highly scalable software-based architecture for communication and cooperation among distributed electronic agents
14 7,069,559	System and method for monitoring software queuing applications
15 7,069,558	System and method for interactively utilizing a user interface to manage device resources
16 7,069,555	Super-region instruction scheduling and code generation for merging identical instruction into the ready-to-schedule instruction

- 17 7,069,551  Method of administering software components using asynchronous messaging in a multi-platform, multi-programming language environment
- 18 7,069,550  Delegation-based class loading of cyclically dependent components
- 19 7,069,548  Inter-procedure global register allocation method
- 20 7,069,545  Quantization and compression for computation reuse
- 21 7,069,544  Dynamic selection of a compression algorithm for trace data
- 22 7,069,543  Methods and systems for software watchdog support
- 23 7,069,541  System and method for a web-based application development and deployment tracking tool
- 24 7,069,537  Techniques for partial loading of a configuration associated with a configuration model
- 25 7,069,531  Method and apparatus for identifying a path between source and target states in a space with more than two dimensions
- 26 7,069,528  System and method for reducing timing violations due to crosstalk in an integrated circuit design
- 27 7,069,527  Algorithm for full-chip resistance extraction
- 28 7,069,526  Hardware debugging in a hardware description language
- 29 7,069,524  Method and device for analyzing a network of conductors
- 30 7,069,523  Automated selection and placement of memory during design of an integrated circuit
- 31 7,069,521  Method and apparatus for exploring a multi-element design through user directed selective rendering
- 32 7,069,518  Indexing methods, systems, and computer program products for virtual three-dimensional books
- 33 7,069,517  System and method for programmatically creating graphical program code in a graphical program
- 34 7,069,515  Method and apparatus for displaying messages in computer systems
- 35 7,069,514  Modeling system for retrieving and displaying data from multiple sources
- 36 7,069,512  Command line interface with indication of network element status
- 37 7,069,511  Platform independent on-line project management tool
- 38 7,069,510  In-vehicle audio browser system having a common usability model
- 39 7,069,508  System and method for formatting text according to linguistic, visual and psychological variables
- 40 7,069,506  Methods and systems for generating enhanced thumbnails
- 41 7,069,505  Document management system, method thereof, and program thereof
- 42 7,069,503  Device and program for structured document generation data structure of structural document
- 43 7,069,501  Structured document processing system and structured document processing method
- 44 7,069,498  Method and apparatus for a web based punch clock/time clock
- 45 7,069,495  Bit error resilience for an internet protocol stack
- 46 7,069,490  Method for retransmission of lost packet in fading channels
- 47 7,069,477  Methods and arrangements to enhance a bus
- 48 7,069,474  System and method for assessing compatibility risk
- 49 7,069,473  Computer recovery method and system for recovering automatically from fault, and fault monitoring apparatus and program used in computer system

50 7,069,470  System and method for intelligent trap analysis

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